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IN THE CLAIMS

- 14. (currently amended) A method of obtaining a variant enzyme of a parent enzyme, wherein said variant has one or more desired properties, wherein said method comprises the steps of:
 - a. utilizing a three-dimensional renditions of the parent enzyme to identify selected mutation sites;
 - b. performing site-saturation mutagenesis at the selected mutation sites to create a library of mutation sites;
 - screening the library of mutation sites for variants having one or more desired properties;
 - d. grading the variants for the one or more desired properties, to provide feedback;
 - e. selecting one or more variants having a desirable grade as a template; and
 - f. using the template and feedback to perform steps b), c), d), and e) on at least one variant having a desirable grade to provide a variant enzyme of the parent enzyme, wherein said variant enzyme comprises one or more desired properties.
- 15. (original) The method of claim 14 wherein the one or more desired properties are substrate activity, thermostability, stability relative to reaction environment, ionic strength range of stability, pressure stability, or pH range of stability.
- 16. (original) The method of claim 14 wherein the one or more desired properties is substrate activity and thermostability.
- 17. (original) The method of claim 14 wherein the enzyme is cutinase.

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- 18. (currently amended) A process for the production of a cutinase variant with hydrolytic activity on polyester, wherein the cutinase is obtained from a *Pseudomonas* species, the process comprising:
 - a. utilizing a three-dimensional rendition of said cutinase to select for amino acid sites likely to demonstrate hydrolytic activity;
 - b. performing site-saturation mutagensis at the selected mutation sites to create a library pf variant amino acid sequences;
 - c. screening the library for variants using assays to detect polyesterase activity and thermostability;
 - d. grading the sites mutated in the variants as beneficial, neutral or detrimental for both polyesterase activity and thermostability to provide feedback;
 - 4 e. selected at least one variant having having at least one beneficial grade; and
 - f. performing steps b), c), and d) to create one or more new libraries using the at least one selected variant and feedback from the grading.
- 19. (currently amended) The method of claim 14, wherein steps b) through f) are repeated at least once.
- (currently amended) The method of claim 14, wherein steps a) through f) are repeated, wherein step a) is performed on the at least one selected variant.
- 21. (currently amended) The method of claim 18, wherein steps b) through e) are repeated at least once.
- 22. (currently amended) The method of claim 18, wherein steps a) through e) are repeated, wherein step a) is performed on the said at least one selected variant.